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EXAMINER
FORMAN, BETTY J

ART UNIT	PAPER NUMBER
1634	

DATE MAILED: 07/23/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/904,175	DOUNG ET AL.	
	Examiner	Art Unit	
	BJ Forman	1634	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *23 April 2003* .

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *2,3,5-9 and 24-31* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☐ Claim(s) _____ is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

FINAL ACTION

1. This action is in response to papers filed 23 April 2003 in which claims 2-3 and 5-9 were amended, claims 1,4 and 10-23 were canceled and claims 24-31 were added. All of the amendments have been thoroughly reviewed and entered. The previous rejections in the Office Action dated 24 December 2002 under 35 U.S.C. 102(a), (b) (e) and under 35 U.S.C. 103(a) are withdrawn in view of the amendments. All of the arguments have been thoroughly reviewed but are deemed moot in view of the amendments, withdrawn rejections and new grounds for rejection. New grounds for rejection necessitated by amendment are discussed.

Claims 2, 3, 5-9 and 24-31 are under prosecution.

Priority

2. Applicant's claim for domestic priority under 35 U.S.C. 119(e) is acknowledged. However, the provisional application 60/145,840 upon which priority is claimed fails to provide adequate support under 35 U.S.C. 112 for claims 2, 3, 5-9 and 24-31 of this application.

Provisional application 60/145,840 fails to provide support for the instantly claimed biochip cartridge. Claims 1-9 are drawn to a biochip cartridge comprising a substrate comprising an array of electrodes, each comprising a self-assembled monolayer and a capture binding ligand. The '840 application provides a general discussion of biochips in a cartridge including valves, but the application does not teach or describe the instantly claimed substrate comprising an array of electrodes, each comprising a self-assembled monolayer and a capture binding ligand. Therefore, the '840 application upon which priority is claimed fails to provide

adequate support under 35 U.S.C. 112 for claims 2, 3, 5-9 and 24-31 of the instant application.

Applicant's comments regarding support under 35 U.S.C. 112, second paragraph provided in provisional application 60/175,539 for the pending claims is acknowledged. While the '539 application teaches biochips with electrodes and a PC board comprising the electrode (page 1, lines 19-24 and 27) the provisional application does not teach or describe the instantly claimed substrate comprising an array of electrodes. However, it is further noted that the '539 application incorporates by reference U.S. Patent No. 6,264,825 which does teach an array of electrodes.

Because the '840 applications fails to provide support for the instant claims, the effective filing date for instant claims 2, 3, 5-9 and 24-3 is the filing date of provisional application 60/175,539 i.e. 01/11/2000.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 28 and 29 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

a. Claim 28 is indefinite for the recitation "Teflon" because the recitation is a trademark, because the trademark is not denoted with the trademark "™" and because the recitation is intended to define or describe a limitation of the biochip.

b. Claim 29 is indefinite for the recitation "Gortex™" because the recitation is a trademark and because the recitation is intended to define or describe a limitation of the biochip.

> If the trademark or trade name is used in a claim as a limitation to identify or describe a particular material or product, the claim does not comply with the requirements of the 35 U.S.C. 112, second paragraph. Ex parte Simpson, 218 USPQ 1020 (Bd. App. 1982). The claim scope is uncertain since the trademark or trade name cannot be used properly to identify any particular material or product. In fact, the value of a trademark would be lost to the extent that it became descriptive of a product, rather than used as an identification of a source or origin of a product. Thus, the use of a trademark or trade name in a claim to identify or describe a material or product would not only render a claim indefinite, but would also constitute an improper use of the trademark or trade name. (see MPEM 2173.05(u)).

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application

designated the United States and was published under Article 21(2) of such treaty in the English language.

6. Claims 24, 2, 3, 5, 7 and 8 are rejected under 35 U.S.C. 102(e) as being anticipated by Burns et al (U.S. Patent No. 6,379,929, filed 19 November 1997).

Regarding Claim 24, Burns et al disclose a biochip cartridge comprising a reaction chamber comprising a substrate comprising a printed circuit board comprising an array of electrodes (Column 42, lines 10-20) the electrodes comprising a self-assembled monolayer and capture binding ligand (Column 26, lines 59-67), an inlet port for the introduction of reagents (column 6, lines 18-32) and interconnects to allow electrical connection of the electrodes to a processor (Column 42, lines 10-20).

Regarding Claim 2, Burns et al disclose the biochip wherein the binding ligands comprising nucleic acids (Column 47, lines 12-34).

Regarding Claim 3, Burns et al disclose the biochip wherein the chamber further comprises a gasket (i.e. capillary valve) to retain fluid in contact with the array (Column 8, lines 35-49).

Regarding Claim 5, Burns et al disclose the biochip wherein the reaction chamber further comprises an outlet port (Column 6, lines 32-35).

Regarding Claim 7, Burns et al disclose the biochip wherein the array is on one surface of the substrate i.e. one wafer (Column 21, lines 49-59; Column 42, lines 10-20 and Fig. 2).

Regarding Claim 8, Burns et al disclose the biochip wherein two surfaces of the substrate comprises an array i.e. arrays on each side (surface) of the glass wafer (Column 41, lines 51-61 and Fig. 2B).

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

8. Claims 2-3, 5-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wohlstadter et al (WO 98/12539, published 26 March 1998) in view of Schembri et al (U.S. Patent No. 6,258,593, filed 30 June 1999).

Regarding Claim 6, Wohlstadter et al disclose a biochip cartridge comprising a reaction chamber and interconnects to allow electrical connection of electrodes to a processor, the reaction chamber comprising a substrate and an inlet port (page 17, line 29-page 19, line 3) and the substrate comprising an array of electrodes each comprising a self-assembled monolayer and a capture binding ligand (page 23, lines 1-9).

Wohlstadter et al do not teach the reaction chamber is configured to minimize introduction or retention of air bubbles. However, Schembri et al teach the similar chamber wherein the chamber is configured to control the presence of a bubble within the chamber wherein the bubble facilitates and improves mixing within the chamber (Column 12, lines 25-42) and taking "care to leave a small bubble of air" in the chamber (Column 17, lines4-8) and hence minimize introduction of additional air bubbles.

It would have been obvious to one of ordinary skill in the art at the time the claimed invention was made to apply the bubble and bubble control of Schembri et al the reaction chamber of Wohlstadter et al for the expected benefit of improving and facilitating reagent mixing as taught by Schembri et al (Column 12, lines 25-42).

Furthermore, the courts have stated that claims drawn to an apparatus must be distinguished from the prior art in terms of structure rather than function see *In re Danly*, 263

F.2d 844, 847, 120 USPQ 528, 531 (CCPA1959). "[A]pparatus claims cover what a device is, not what a device does." Hewlett-Packard Co. v. Bausch & Lomb Inc., 909 F.2d 1464, 1469, 15 USPQ2d 1525,1528 (Fed. Cir. 1990) (see MPEP, 2114). The apparatus of Schembri et al is configured to control introduction and retention of bubbles meeting the structural limitations of the instantly claimed biochip cartridge. Therefore, the instantly claimed cartridge is encompassed by the teachings of Wohlstadter and Schembri et al

Regarding Claim 2, Wohlstadter et al disclose the biochip wherein the capture binding ligands are capture probes e.g. bio-specific binding partner (page 18, line 37-page 19, line 3).

Regarding Claim 3, Wohlstadter et al disclose the biochip wherein said reaction chamber further comprises a gasket to retain fluid in contact with said array i.e. compression means removable placed on opposite sides of the two supports (page 81, lines 29-32) and o-rings which define the active area (e.g. page 196, lines 18-22 and page 197, last paragraph).

Regarding Claim 5, Wohlstadter et al disclose the biochip further comprising an outlet port i.e. fluid channel (#184) traversing the cassette (page 18, lines 15-22 and Fig. 1).

Regarding Claim 7, Wohlstadter et al disclose the biochip wherein said array is on one surface of said substrate (page 8, line 36-page 9, line 11; page 78, line 16-page 79, line 13; and Fig. 2-3).

Regarding Claim 8, Wohlstadter et al teach the biochip wherein one surface comprises an array (Fig. 1-3). Schembri et al teach the similar biochip wherein each of two surfaces of the substrate comprise an array (Fig. 1) whereby multiple arrays are formed thereby providing for multiple assays (Column 11, lines 25-37).

It would have been obvious to one of ordinary skill in the art at the time the claimed invention was made to modify the substrate surface of Wohlstadter et al with the two array surfaces as taught by Schembri et al for the expected benefit of providing for multiple assays within a single cartridge as taught by Schembri et al (Column 11, lines 25-37).

9. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Wohlstadter et al (WO 98/12539, published 26 March 1998) in view of Schembri et al (U.S. Patent No. 6,258,593, filed 30 June 1999) as applied to Claim 6 above and further in view of Anderson et al (U.S. Patent No. 6,326,211, filed 27 June 1996).

Regarding Claim 9, Wohlstadter et al teach a biochip cartridge comprising a reaction chamber and interconnects to allow electrical connection of electrodes to a processor, the reaction chamber comprising a substrate and an inlet port (page 17, line 29-page 19, line 3) and the substrate comprising an array of electrodes each comprising a self-assembled monolayer and a capture binding ligand (page 23, lines 1-9) wherein the cartridge comprises means for introducing reagents into the cartridge (page 18, lines 15-22) but they do not teach means includes a storage well in the cap. However, means for introducing reagents into a cartridge comprising a storage well in a cartridge cap was known in the art at the time the claimed invention was made as taught by Anderson et al.

Anderson et al teach a similar cartridge comprising a reaction chamber and interconnects, the reaction chamber comprising a substrate and an inlet port and electrodes wherein the substrate comprises a capture binding ligand (Column 2, line 22-51) and further comprising means for introducing reagents into the cartridge wherein the means comprises a cap (well #510 illustrated in the top portion of the cartridge illustrated in Fig. 5B) comprising at least one storage well comprising assay reagents (Column 24, lines 44-65 and Fig. 5 A & B) wherein the arrangement of storage wells adjacent to the substrate provides easy access to reagents and convenient storage reagents (Column 25, lines 42-52).

It would have been obvious to one of ordinary skill in the art at the time the claimed invention was made to apply the cap comprising a storage well as taught by Anderson et al to

the cartridge of Wohlstadter et al for the expected benefits of easy access to reagents and convenient storage reagents as taught by Anderson et al (Column 25, lines 42-52).

Response to Arguments

10. Applicant's arguments regarding the previous rejections under 35 U.S.C. 102 have been considered but are deemed moot in view of the amendments, withdrawn rejections and new grounds for rejection.

Applicant argues that Schembri et al and Wohlstadter et al fail to provide motivation to combine their teachings. Applicant further argues that Schembri does not discloses a chamber designed to minimize the introduction or retention of air bubbles and therefore cannot render the instant invention obvious. The argument has been considered but is not found persuasive because as stated above, the courts have stated that claims drawn to an apparatus must be distinguished from the prior art in terms of structure rather than function see *In re Danly*, 263 F.2d 844, 847, 120 USPQ 528, 531 (CCPA1959). "[A]pparatus claims cover what a device is, not what a device does." Hewlett-Packard Co. v. Bausch & Lomb Inc., 909 F.2d 1464, 1469, 15 USPQ2d 1525,1528 (Fed. Cir. 1990) (see MPEP, 2114). The apparatus of Schembri et al is configured to control introduction and retention of bubbles meeting the structural limitations of the instantly claimed biochip cartridge. Therefore, the instantly claimed cartridge is encompassed by the teachings of Wohlstadter and Schembri et al. Furthermore, it would have been obvious to one of ordinary skill in the art at the time the claimed invention was made to modify the biochip cartridge of Wohlstadter et al with the configuration to control introduction or retention of air bubbles. The motivation to do so comes from Schembri et al wherein they teach that taking "care to leave a small bubble of air" in the chamber (Column 17, lines4-8) provides a bubble within the chamber to facilitate and improve mixing within the chamber (Column 12, lines 25-42).

Regarding the previous rejection over Anderson et al, Applicant argues that the rejection is improper because the filing date of Anderson et al is after the effective filing date of the instant claims. The argument has been considered but is not found persuasive because the Anderson et al reference is a divisional of 09/294,700 filed 19 April 1999 which is prior to the effective filing date of the instant claims (i.e. 11 January 2000). Therefore, the Anderson reference is prior art against the instant claims.

Applicant argues that Anderson et al and Wohlstadter et al fail to provide motivation to combine their teachings. In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988)and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, Anderson et al clearly provide the motivation to modify the cartridge of Wohlstadter by providing assay reagent storage wells adjacent to the substrate (e.g. in the cap) by teaching that the arrangement of storage wells adjacent to the substrate provides easy access to reagents and convenient storage reagents (Column 25, lines 42-52).

11. Claims 9, 25-31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Burns et al (U.S. Patent No. 6,379,929, filed 19 November 1997) in view of Anderson et al (U.S. Patent No. 6,326,211, filed 27 June 1996).

Regarding Claim 9, Burns et al disclose a biochip cartridge comprising a reaction chamber comprising a substrate comprising a printed circuit board comprising an array of electrodes (Column 42, lines 10-20) the electrodes comprising a self-assembled monolayer and capture binding ligand (Column 26, lines 59-67), an inlet port for the introduction of reagents (column 6, lines 18-32) and interconnects to allow electrical connection of the electrodes to a processor (Column 42, lines 10-20) wherein the cartridge comprises means for introducing reagents into the cartridge (Column 8, lines 18-56) but they do not teach means includes a storage well in the cap. However, means for introducing reagents into a cartridge comprising a storage well in a cartridge cap was known in the art at the time the claimed invention was made as taught by Anderson et al.

Anderson et al teach a similar cartridge comprising a reaction chamber and interconnects, the reaction chamber comprising a substrate and an inlet port and electrodes wherein the substrate comprises a capture binding ligand (Column 2, line 22-51) and further comprising means for introducing reagents into the cartridge wherein the means comprises a cap (well #510 illustrated in the top portion of the cartridge illustrated in Fig. 5B) comprising at least one storage well comprising assay reagents (Column 24, lines 44-65 and Fig. 5 A & B) wherein the arrangement of storage wells adjacent to the substrate provides easy access to reagents and convenient storage reagents (Column 25, lines 42-52).

It would have been obvious to one of ordinary skill in the art at the time the claimed invention was made to apply the cap comprising a storage well as taught by Anderson et al to the cartridge of Burns et al for the expected benefits of easy access to reagents and convenient storage reagents as taught by Anderson et al (Column 25, lines 42-52).

Regarding Claim 25, Burns et al teach the biochip cartridge of Claims 6 and 24 wherein the inlet port comprises a valve for controlled introduction of reagents (Column 8, lines 18-56) but they do not teach the inlet port comprises a semipermeable membrane. However, valves comprising semipermeable membranes were well known and routinely practiced in the art at

the time the claimed invention was made as taught by Anderson et al (Column 36, lines 47-65) who further teach that valves comprising membranes are preferred for controlling fluid flow. It would have been obvious to one of ordinary skill in the art at the time the claimed invention was made to modify the valve of Burns et al by incorporating a semipermeable membrane as taught by Anderson et al based on the preferred teaching of Anderson et al (Column 36, lines 47-65).

Regarding Claim 26, Burns et al disclose a biochip cartridge comprising a reaction chamber comprising a substrate comprising a printed circuit board comprising an array of electrodes (Column 42, lines 10-20) the electrodes comprising a self-assembled monolayer and capture binding ligand (Column 26, lines 59-67), an inlet port for the introduction of reagents (column 6, lines 18-32) and interconnects to allow electrical connection of the electrodes to a processor (Column 42, lines 10-20) wherein the inlet port comprises a valve for controlled introduction of reagents (Column 8, lines 18-56) but they do not teach the inlet port comprises a semipermeable membrane. However, valves comprising semipermeable membranes were well known and routinely practiced in the art at the time the claimed invention was made as taught by Anderson et al (Column 36, lines 47-65) who further teach that valves comprising membranes are preferred for controlling fluid flow. It would have been obvious to one of ordinary skill in the art at the time the claimed invention was made to modify the valve of Burns et al by incorporating a semipermeable membrane as taught by Anderson et al based on the preferred teaching of Anderson et al (Column 36, lines 47-65).

Regarding Claims 27-28, Anderson et al further teach the membrane allows escape of gas while retaining the sample fluid e.g. Teflon (Column 22, lines 6-17 and Fig. 2B). It would have been obvious to one of ordinary skill in the art at the time the claimed invention was made to apply the Teflon membrane of Anderson et al to the cartridge of Burns et al to for the expected benefit of permitting the escape of any displaced gas from the chamber as taught by Anderson et al (Column 22, lines 6-9)

Regarding Claim 29, Anderson et al further teach the membrane allows escape of gas while retaining the sample fluid e.g. Teflon (Column 22, lines 6-17 and Fig. 2B) but they do not teach the permeable membrane is Gortex™. However, the specification teaches that Teflon and Gortex™ are functional equivalents (page 13, second paragraph).

> For example, a semi-permeable membrane or filter may be used, that preferentially allows the escape of gas but retains the sample fluid in the chamber. For example, porous teflons such as Gortex™ allow air but not fluids to penetrate.

The courts have stated with regard to homologs that the greater the physical and chemical similarities between the claimed species and any species disclosed in the prior art, the greater the expectation that the claimed subject matter will function in an equivalent manner (see *Dillon*, 99 F.2d at 696, 16 USPQ2d at 1904). Therefore, based on the functional equivalency of Teflon and Gortex™ one of ordinary skill in the art would have been motivated to substitute Gortex™ for the Teflon of Anderson et al because one of ordinary skill would have expected the two membranes to function in an equivalent manner.

Regarding Claim 30, Burns et al teach the biochip cartridge Claims 6 and 24 wherein the substrate comprises a circuit board (Column 42, lines 10-20)

Regarding Claim 31, Burns et al teach the biochip of Claims 6, 24 and 26 is used for amplification (Abstract) but they do not teach a protein capture ligand. However, Anderson et al teach a similar biochip useful for amplification wherein the substrate comprises a protein capture ligand i.e. anti-enzyme antibody. Furthermore, they teach that capture of the enzyme provides the enzyme with stability and long-term shelf life (Column 10, lines 46-65). It would have been obvious to one of ordinary skill in the art at the time the claimed invention was made to modify the amplification substrate of Burns et al by providing a protein capture ligand e.g. anti-enzyme antibody as taught by Anderson et al for the expected benefit of providing the enzyme with stability and long-term shelf life as taught by Anderson et al (Column 10, lines 46-65).

12. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Conclusion

13. No claim is allowed.

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to BJ Forman whose telephone number is (703) 306-5878. The examiner can normally be reached on 6:30 TO 4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gary Benzion can be reached on (703) 308-1119. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-4242 for regular communications and (703) 308-8724 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0196.

BJ Forman, Ph.D.
Patent Examiner
Art Unit: 1634
July 22, 2003